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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/653,336	08/31/2000	Kenichi Takekawa	196124US2	4688

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EXAMINER

SHAPIRO, LEONID

ART UNIT PAPER NUMBER

2673

DATE MAILED: 10/17/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/653,336

Applicant(s)

TAKEKAWA ET AL.

Examiner

Leonid Shapiro

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_ 6) ☐ Other: \_\_\_\_

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-4, 6-9, 11-14 and 16-19 rejected under 35 U.S.C. 103(a) as being unpatentable over Blue et al. (US Patent No. 5,196,835) in view of Marcke (US Patent No. 6,215,116 B1).  
As to claims 1-2, 6-7, 11-12 and 16-17 Blue et al. teaches about a coordinate inputting/detecting apparatus, in which a designated device configured to designate a position in at least substantially flat two-dimensional coordinate inputting/detecting area of the coordinate inputting/detecting apparatus is judged as located in predetermined range of coordinate area when an optical detection signal of an optical unit, configured optically detect the designated device inserted into the predetermined range of the coordinate inputting/detecting area, exceeds a first threshold value, and in which whether or not the designating device has been inserted into the predetermined range of coordinate inputting/detecting area is judged and coordinates of a position in the coordinate inputting/detecting area, designated by the designated device inserted in the predetermined range of the coordinate inputting/detecting area, are recognized in accordance with the optical detection signal of the optical unit (See Fig. 1-3, items 10, 20,22, in description See Col. 2, lines 6-12, Col. 4, Lines 55-68, Col. 5, Lines 1-25 and Col. 6, Lines 42-48).  
Blue et al. does not teach about a second threshold value used in recognizing the coordinates of the position in the coordinate inputting/detecting area, designated by the designating device

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inserted in the predetermined range of the coordinate inputting/detecting area, is set to be higher than the first threshold value used in judging if the designating device has been inserted into the predetermined range of the of the coordinate inputting/detecting area.

Marcke shows in "Continuous threshold adjustable proximity detecting device" how to adjust second threshold value grater than the first threshold level (See Fig.6, items 303,310,311,312, in description See Col. 1, Lines 62-67, Col. 2, Lines 1-4 and Col.10, Lines 57- 68, Col. 11, Lines 1-10). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to use the second threshold value as shown by Marcke in Blue et al. device to further increase range and reliability of device

As to claims 3-4, 8-9, 13-14 and 18-19 Blue et al. teaches about a distance judging device configured to determine a distance between designated device inserted into the predetermined range of the coordinate inputting/detecting area and the optical unit (See Fig. 1, items 10, 20, 22, in description See Col. Col.6, Lines 42-48). Blue et al. does not teach about a second threshold value prescribing device configured to prescribe, according to a result of the judgment by the distance judging device as to the distance between the designating device inserted into the predetermined range of the coordinate inputting/detecting area and the optical unit, the first threshold value, such that the first threshold value is decreased as distance between the designated device inserted into the predetermined range of the coordinate inputting/detecting area and the optical unit is increased, and prescribes the first threshold value such that if the designated device is located at a farthest point from the optical unit. Marcke teaches that the amplitude for amplified electrical signals and means for increasing the energy levels depend on distance between emitter/receiver an object, and they could be increased or decreased depending

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on that distance. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to use this dependence which is equivalent to changing threshold value depending on distance (also prescribe the threshold value such that if the designated device is located at a farthest point from the emitter/receiver), as shown by Marcke in Blue et al. device to further increase range and reliability of device.

2. Claims 5, 10, 15 and 20 rejected under 35 U.S.C. 103(a) as being unpatentable over Blue et al. and Marcke as aforementioned to claim 3 above and in view Fumihiko et al. (JP No.09319501 A), cited by the applicant.

Blue et al. and Marcke do not teach about first and second optical units, wherein the second threshold value prescribing device prescribes the first threshold value for each of the first and second optical units. Fumihiko et al. shows two optical units installed in adjacent corners (See Drawing 1, items 1-3, k1, k2 and Detailed description, 0007). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to use first and second optical units, as shown by Marcke in Blue et al. device to further increase range and reliability of device.

4. Applicant's arguments filed on 08.31.02 have been fully considered but they are not persuasive.

In reply, applicant stated on page 3, that Van Marcke discloses using two different thresholds that second threshold is higher than first. In applicant's system the first threshold level set at beginning artificially low as low that system can not tolerated any noise (See Fig. 7, items S7, S15, S25). This is why later the second threshold set up higher which will help in

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reducing trailing error. In application further adjustment to the reduced power with the distance done by the setting the threshold level such that if the designating device is located at a farthest point from the optical unit, which again reduced the noise immunity to the lowest possible level. The continued adjustment of the threshold will be preferable. This is how it is done in Van Marcke reference with only difference that instead of using threshold, Van Marcke is using continues adjustment of input power to light source which is equivalent of the threshold adjustment from the point of view of the subject matter of invention "... to avoid a trailing phenomenon".

In order to use the small size of the light source, which is located in the focal area of condensing lens the applicant probably need to use pulsed source to reduce the power dissipation.

As to arguments on the page 4, the Van Marcke approach will allow to use much greater large distance with continues adjustment instead of going through the CPU adjustment of the fix second threshold with low noise immunity.

As to arguments on the page 5, the applicant's approach will have loop through the measured distance a and b, the CPU and set up of the first and second threshold (See flowchart – Fig. 7A-7C).

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


*Conclusion*

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonid Shapiro whose telephone number is 703-305-5661. The examiner can normally be reached on 8 a.m. to 5 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on 703-305-4938. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4750.

ls

  
BIPIN SHALWALA  
SUPERVISORY PATENT EXAMINER  
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